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CASE REPORT

Urethral stricture in male-to-female transsexual patients—Report of two cases

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Summary We report two cases of urethral stricture in male-to-female transsexual patients. The patients came to our outpatient department complaining of voiding difficulty. Physical examination showed stenosis of the urethral meatus in both patients. They were admitted for surgery, and postoperatively, both patients had a period of indwelling catheterization for about 2–3 months. After removal of the Foley catheters, we taught the patients self-bougination once daily. No urethral stricture was noted during follow-up. In male-to-female transsexual patients, urethral stricture may be a long-term complication. Regular bougination is a proper method to prevent stricture of the urethra. Long-term follow-up is necessary.

1. Introduction

In male-to-female transsexual patients, sex reassignment surgery typically involves removal of the external male reproductive organs and the construction of a neovagina and neoclitoris.[1] Construction of the neovagina currently relies on inversion of the penile skin to line the newly created space between the pars fixa of the urethra and the rectum.[2] Urethral stricture is one of the significant complications. It was reported in 18.3% of patients and 5.6% complained of spraying of urine.[3] Urethral stricture develops because of a process of fibrosis and cicatrix formation of the urethral mucosa and surrounding tissues. Strictures can occur at any urethral location from the external urethral meatus up to the bladder neck.[4] Post transsexual surgery urethral stricture may be due to scar formation, meatal skin contraction, and even due to benign prostate hyperplasia. We report hereby two cases of urethral stricture after transsexual surgery.

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2. Case reports

The first patient was 32 years old and underwent transsexual surgery about 10 years ago. Progressive voiding difficulty and micturition pain were noted about 5 years ago. She (the final gender on the identification card is female) came to our outpatient department for help and bougination was performed, but progressive voiding difficulty was noted. Physical examination showed severe urethral meatal stenosis. Hence, she was admitted to our hospital for surgery. We used a 6/7.5 Fr. ureterorenoscope (Richard Wolf GmbH, Knittlingen, Germany) to try to find the urethral tract, but in vain. The caliber of the ureterorenoscope was too large to engage the urethral meatus. We therefore used a filiform dilator and followers (Fig. 1) to dilate the urethra. After urethral dilatation, a 6/7.5 Fr. ureterorenoscope was inserted into the bladder. Trabeculation was found. An 18 Fr. Foley catheter was inserted after operation. The Foley was kept in place for 3 months.

The second patient was 46 years old and had transsexual surgery about 27 years ago. She suffered voiding difficulty and straining in voiding about 8 years ago. Because of micturition pain and dribbling of urine, she came to our outpatient department 4 years ago. Bladder echo was performed and her post-voiding residual urine was 87.2 mL. Physical examination showed stricture of the urethral meatus (Fig. 2). Stricture of the urethral meatus was less severe in this patient than in the first patient. It allowed entry of a 6/7.5 Fr. ureterorenoscope into the urethra. A distal urethral stricture with multiple angulations of the urethra was noted. The urethra was dilated with Amplatz dilators from 6 Fr. to 22 Fr. (Fig. 3). An 18 Fr. Foley catheter was inserted and kept in place for 2 months. Uroflowmetry showed a low flow rate but post-voiding residual urine was 17.6 mL after the removal of the Foley.

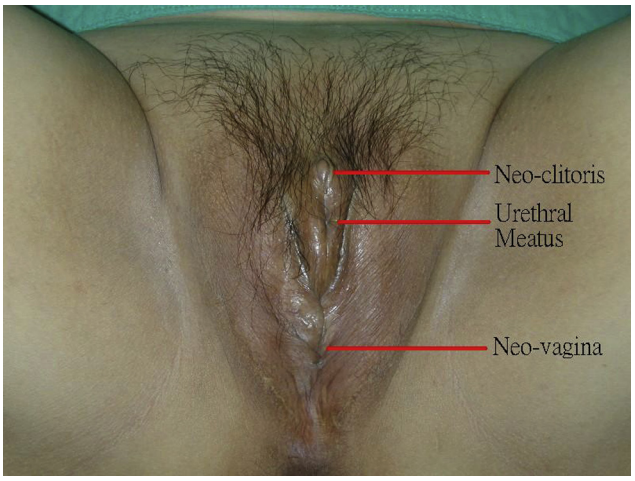

Figure 2 Urethral meatal stricture in Patient 2.

3. Discussion

Severe meatal stricture was noted in the first patient, and a 6/7.5 Fr. ureterorenoscope could not be introduced into the urethra. We therefore used a filiform dilator and followers to dilate the urethra. The stricture level was at the urethral meatus. It may have been caused by postoperative scar contraction. Hence, we suggested self-bougination once daily.

In the second patient, the 6/7.5 Fr. ureterorenoscope could be introduced into the urethra. We therefore inserted a guide-wire and used Amplatz dilators from 6 Fr. to 22 Fr. along the guide-wire to dilate her urethra. Although the meatal stricture in the second patient was less severe than in the first patient, the cause of the stricture was more

Figure 1 Urethral dilatation by filiform dilator and follower.

Figure 3 Urethral dilatation by Amplatz dilator.

complicated than in the first one. It developed probably through a process of fibrosis and cicatrix formation of the urethral mucosa and surrounding tissues. We also taught her self-bougination once daily. We asked both patients to return to our outpatient department regularly for follow-up. Uroflowmetry performed in each patient showed a low flow rate (<20 mL/second), and residual urine was <50 mL.

Construction of the neovagina currently relies on inversion of the penile skin to line the newly created space between the pars fixa of the urethra and the rectum. The prostate and the seminal vesicles are left in place so as to avoid the possibility of short- and long-term morbidity associated with radical prostatectomy.[2] Benign prostate hyperplasia and prostate cancer are rare in male-to-female transsexual patients. Nevertheless, prostatic disease has been reported in transsexual women. In our two patients, prostates were seen under cystoscopy, but they were not enlarged. Follow-up of the prostate status may be warranted as part of the post-transition care for these two patients. Weyers et al[2] proposed transvaginal ultrasound for the evaluation of the prostate status.

Both male-to-female and female-to-male transsexuals have an increased risk for the development of micturition disorders, including stress urinary incontinence and an overactive bladder, compared to age-matched control groups and should be counseled preoperatively.[5] Causes for the development of incontinence might be related to pudendal nerve damage, hormonal reasons, and aging.

Between May 2001 and April 2008, Wagner et al[6] performed 50 male-to-female gender-transforming surgeries. At a mean follow-up of 3 years, no urethral stricture was noted. The most common complication (10%) was shrinkage of the neovagina, which could be corrected by a second surgical intervention.[6] Another large series of early results after male-to-female (feminizing) genitoplasty showed that urinary problems were present in 19 (27%) patients; of these, 18 (26%) required surgical revision, 14 (20%) complained of urinary spraying, 18 (26%) had an upward directed stream, and 16 (23%) had urethral stenosis.[3] In our cases, urethral stricture was noted 5 years and 23 years after surgery, respectively. After operation, both patients had a period of indwelling catheterization for about 2—3 months. After removal of the Foley, we taught them self-bougination once daily. We followed these two patients for 5 years and 4 years, respectively. No more urethral strictures were noted. Although the flow rates of both patients were less than normal (20 m complication). Hence, urethral dilatation by themselves and long-term follow-up are necessary.

In conclusion, in male-to-female transsexual patients, urethral stricture may be due to different causes. Different treatment modalities are available. Regular bougination is a proper method to prevent stricture of the urethra. Long-term follow-up is necessary.

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